EA530 Series Compact Limit Switches- Product Instructions

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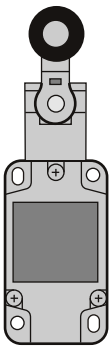


IMPORTANT

Instructions for proper applications and uses of COMPACT LIMIT SWITCHES

EXPERIENCE HAS SHOWN THAT THE MECHANICAL AND ELECTRICAL OPERATING LIFE OF A LIMIT SWITCH IS INFLUENCED TO A LARGE DEGREE BY PROPER INSTALLATION AND APPLICATION PROCEDURES. THIS PUBLICATION IS INTENDED TO BE USED AS A GUIDE.

Wiring and Mounting:

- Unless specifically designed for such service limit switches **SHOULD NOT BE** submerged in or splashed with oils, coolant or other liquids**.** CONSULT FACTORY.
- Limit switches **MUST NOT BE** used in locations where temperature or atmospheric conditions are beyond those for which they have been specifically designed.
- Power from different sources **MUST NOT BE** connected to the contacts of one limit switch unless specifically designed for such service.
- Limit switches **MUST BE** used within their contact ratings and the appropriate limits switch bulletin for acceptable environmental conditions in which the switch has been designed to function properly.
- Limit switches **SHOULD BE** mounted rigidly and in readily accessible locations, with suitable clearances to permit easy service and replacement when necessary. Cover plates **SHOULD** face the maintenance access point.
- Limit switches **SHOULD BE** placed in locations where machining chips do not accumulate under normal operating conditions to avoid chip interference with the lever operation.
- Opposite polarities **MUST NOT BE** connected to the contacts of one limit switch unless the limit switch is specifically designed for such service.

WARNING:

A SWITCH IN A PROTECTIVE INTERLOCKING CIRCUIT SHOULD BE USED WITH AT LEAST ONE OTHER DEVICE THAT WILL PROVIDE A REDUNDANT PROTECTIVE FUNCTION, AND THE CIRCUIT SHOULD BE SO ARRANGED THAT EITHER DEVICE WILL INTERRUPT THE INTENDED OPERATION OF THE CONTROLLED EQUIPMENT. (PROPOSED NEMA ICS 2-225.95 St'd.)

SERVICING ENERGIZED INDUSTRIAL CONTROL EQUIPMENT CAN BE HAZARDOUS. SEVERE INJURY OR DEATH CAN RESULT FROM ELECTRICAL SHOCK, BURN OR UNINTENDED ACTUATION OF CONTROLLED EQUIPMENT.

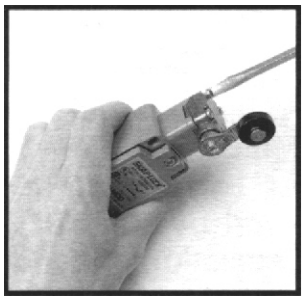
RECOMMENDED PRACTICE IS TO DISCONNECT AND LOCK OUT CONTROL EQUIPMENT FROM POWER SOURCES, AND DISCHARGE STORED ENERGY IN CAPACITORS, IF PRESENT. IF IT IS NECESSARY TO WORK IN THE VICINITY OF ENERGIZED EQUIPMENT, ONLY QUALIFIED PERSONNEL SHOULD BE PERMITTED TO PERFORM SUCH WORK , USING ALL APPLICABLE SAFETY PRACTICES AND PROTECTIVE EQUIPMENT.

IMPORTANT: MAINTENANCE NOTE

LOW AND HIGH TEMPERATURE LIMIT SWITCHES ARE MANUFACTURED USING SPECIAL MATERIALS AND COMPONENTS NOT AVAILABLE AS MAINTENANCE KITS FROM THE FACTORY. DISCARD DAMAGED OR WORN LIMIT SWITCHES AND REPLACE WITH NEW SWITCHES FROM THE FACTORY.

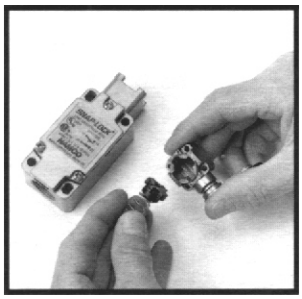
Head Rotation Procedure

STEP 1



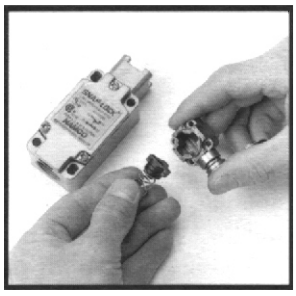
Remove 4 top screws. (Mechanism is spring-loaded. Watch out for parts.)

STEP 2



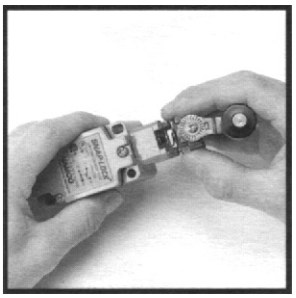
Remove spring and plunger assembly from head.

STEP 3



Note orientation of plunger assembly*

STEP 4



Re-assemble.

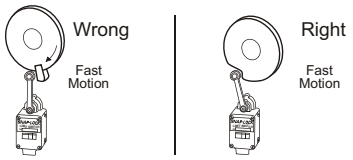
* Rotating it clockwise 90° makes it a clockwise-only switch. Rotating it counter-clockwise makes it a counter-clockwise-only switch. (Switch operates both directions when shipped).

Actuator Consideration

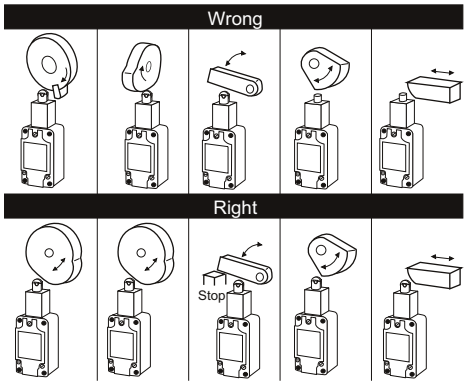
Where relatively slow motions operate the limit switch, a snap-acting or snap-lock design **SHOULD BE** used.

Where relatively fast motions are involved, cam arrangement **SHOULD BE** such that the actuator does not receive a severe impact.

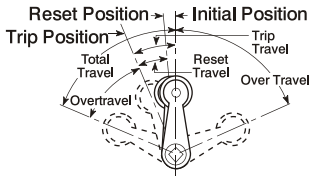
Where relatively fast motions are involved, cams **MUST BE** designed such that the limit switch will be held operated long enough to operate relays, valves, etc.



For limit switches with pushrod actuators, the actuating force **SHOULD BE** applied as nearly as possible in line with the pushrod axis.



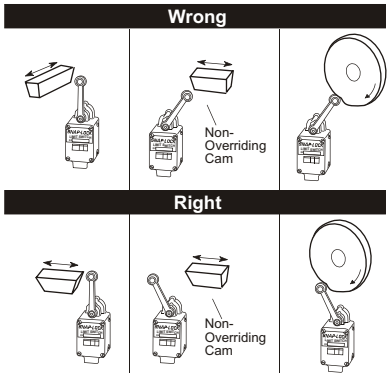
Limit switches **MUST NOT BE** operated beyond the manufacturer's recommended travel. Operating positions and lever travel terminology are illustrated in drawing below. For specifications of a specific switch, refer to the switch bulletin.



NOTE: When loosening or tightening the pipe plug or set screw used to clamp the actuating lever in the desired position, care must be exercised to restrain the shaft/lever assembly so as not to transmit the applied torque to the switch itself.

Cam or dog arrangements **SHOULD BE** such that the actuator is not suddenly released to snap back freely unless specifically designed for such service.

For limit switches with lever actuators, the actuating force **SHOULD BE** applied as nearly perpendicular to the lever as practical and perpendicular to the shaft axis in which the lever rotates.



A limit switch actuator **MUST BE** allowed to move far enough for positive operation of the contacts.

Limit switches **MUST BE** mounted in locations which will prevent false operation by normal movements of operator or machine components.

Limit switches are designed for proper performance with the actuators with which they are supplied. Supplementary actuators **SHOULD NOT BE** used unless the limit switches are specifically designed for them.

Operating mechanisms for limit switches **MUST BE** so designed that, under any operating or emergency conditions, the limit switch is not operated beyond its overtravel limit position. A limit switch **MUST NOT BE** used as a mechanical stop.

The user should refer to NFPA 70B, RECOMMENDED PRACTICE FOR ELECTRICAL MAINTENANCE, published by the National Fire Protection Association, for additional information.

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